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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,815

12/15/2005

Seiichi Saito

8007-1101

9007

466 7590 03/31/2008

YOUNG & THOMPSON
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EXAMINER

USELDING, JOHN E

ART UNIT

PAPER NUMBER

4171

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,815	Applicant(s) SAITO, SEIICHI	
	Examiner John Uselding	Art Unit 4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/14/2006, 9/20/2005, 12/15/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it is only 34 words long. The abstract should be within the range of 50-150 words. Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: there is a typographical error in paragraph 0007. The word filed should be field.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Dershem et al. (6,211,320). Dershem et al teach a composition containing a polyfunctional vinyl ether compound (column 10, lines 35-65) and the polyhydric phenol compound, tertiary-butyl hydroquinone (column 17, line 7).

5. Regarding claim 9: applicant claims a prepreg formed using the composition of claim 1. The composition of Dershem et al. (column 1, lines 5-35) is specifically used in the making of laminates and prepreps for electrical device manufacturing.

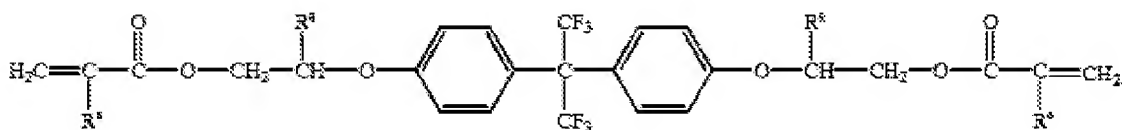
Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-8 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dershem et al. (6,211,320), in view of Seiichi et al. (2001-354836).

8. Regarding claims 2-7, and 10-20: Dershem et al. teach a curable composition containing a tetra- or higher functional vinyl ether of the structure (column 10, lines 35-65):

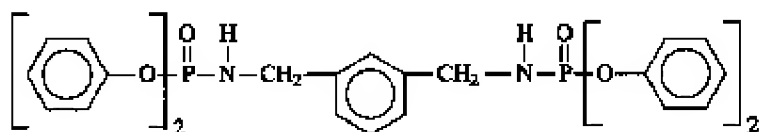


in the range of 1 to 60 wt% (column 8, lines 52-55) and a silica filler (column 16, lines 46) in the range of about 10 to about 50 wt %.(column 17, lines 60-61). These weight percentages meet the parts by weight ranges given by the applicant in claim 2. The examiner takes the position that CF₃ is a functional group. Also Dershem et al. state: "As readily recognized by those of skill in the art, the quantity of the various components employed to prepare invention compositions can vary within wide ranges." (column 17,

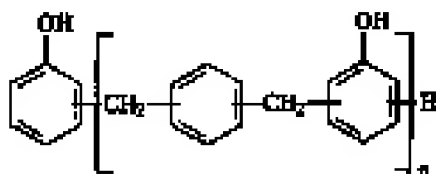
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lines 55-57). What Dershem et al. fails to teach is the flame retardant of claim 20 and the phenol of claim 4.

9. Seichi et al. teach a fire retardant epoxy composition containing a fire retardant of the structure (formula 23):



and polyhydric phenol of the structure (Table 1):



10. The fire retardants used by Seichi et al. were used within the parts by weight range of claim 2 (see table 1). Also, the applicants provided a very large range. As Dershem et al. state: "As readily recognized by those of skill in the art, the quantity of the various components employed to prepare invention compositions can vary within wide ranges." (column 17, lines 55-57).

11. The polyhydric phenol was used by Seichi et al. as a curing agent for an epoxy resin composition. Dershem et al. teach: "The epoxy resinous compositions also can contain accelerating agents and curing agents as are well-known in the art." (column 24, lines 17-19). It would be obvious to incorporate the curing agent of Seichi et al. into the composition of Dershem et al. since they are both epoxy resin compositions. Dershem et al. does not teach a range for the curing agent but it is obvious to alter the amount of

curing agent depending on how much one wants to cure a resin for a desired hardness.

Also applicants provide a very wide range for the polyhydric phenol compound in claim

2. As Dershem et al. state: "As readily recognized by those of skill in the art, the quantity of the various components employed to prepare invention compositions can vary within wide ranges." (column 17, lines 55-57).

12. Regarding claim 8: applicant claims a polyepoxy compound. The epoxy resin of Seiichi et al. (paragraph 0001) meets this limitation.

13. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine the fire retardant composition of Seiichi et al. and the composition of Dershem et al. Both, the composition of Dershem et al. (column 1, lines 5-35) and the composition of Seiichi et al. (paragraph 0092), are used in the making of laminates and prepregs for use in electrical device manufacturing. Dershem et al. teach that their composition may contain a fire retardant (column 1, line 54), and can be used in thermosetting resins (column 12, lines 51-53), especially epoxy resins (column 24, line 25). It would have been obvious to combine the workable properties (column 3, lines 58-61) of Dershem et al. composition with the epoxy composition of Seiichi et al. that provides a fire retardant and good mechanical properties (paragraph 0011) to make a fire retardant epoxy composition.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Uselding whose telephone number is (571)270-

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5463. The examiner can normally be reached on Monday-Thursday 6:00a.m. to 4:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 4174

John Uselding
Examiner
Art Unit 4171